Author's response to reviews

Title: The impact of chemotherapy-associated neutrophil/lymphocyte counts on prognosis of adjuvant chemotherapy in colorectal cancer

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The Biomed Central Editorial Team

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- The impact of chemotherapy-associated neutrophil/lymphocyte counts on prognosis of adjuvant chemotherapy in colorectal cancer. Chu-Yuan Hong et al.

Thank you for consideration of our manuscript for publication in your journal. We have reviewed the above manuscript according to your reviewer’s comments.

Reviewer: Athanasios Kotsakis

A major comment has not been answered in that revision:

It is understandable that a long term (e.g. > 3 months) lymphopenia indicates an immune suppression which may influence the anti-tumor response and the proposed mechanisms are acceptable. But, how a transient lymphopenia (< 28 days) can be a predictive/prognostic marker? What could be a liable mechanism? I would suggest to the authors to add a paragraph in the discussion section which will strengthen the messages of the present study.

Our study showed chemotherapy-associated lymphopenia <0.66×10⁹/L/0.91×10⁹/L was the independent prognostic factor for DFS/OS, respectively. However, lymphopenia <0.66×10⁹/L/0.91×10⁹/L was not a transient lymphopenia (< 28 days). In fact, when duration of lymphopenia (≥28 days or ≤28 days) was included in our statistical analysis, the cut-off of lymphopenia was 1.0×10⁹/L (we have also indicated that on page 7 in the 11th line). Duration of lymphopenia <1.0×10⁹/L for those who have a chemotherapy-associated lymphopenia <0.66×10⁹/L was 80.76±49.64 days, while that for those with chemotherapy-associated lymphopenia ≥0.66×10⁹/L was 7.43±12.38 days. Similarly, duration of lymphopenia <1.0×10⁹/L for those who have a chemotherapy-associated lymphopenia <0.91×10⁹/L was 51.84±43.79 days, while that for those with chemotherapy-associated lymphopenia ≥0.91×10⁹/L was 1.43±5.01 days. Nevertheless, cox regression model showed chemotherapy-associated lymphopenia <0.66×10⁹/L/0.91×10⁹/L, but not duration of lymphopenia <1.0×10⁹/L, was the independent prognostic factor. That suggest chemotherapy-associated
lymphopenia level, rather than duration of lymphopenia <1.0×10^9/L, may play an important role in the prognosis of CRC receiving adjuvant chemotherapy.

The following statements now appear in the 4th paragraph of the Discussion of the paper:

Moreover, though chemotherapy associated lymphopenia <0.66×10^9/L/0.91×10^9/L showed a longer duration of lymphopenia <1.0×10^9/L compared with lymphopenia ≥0.66×10^9/L/0.91×10^9/L (80.76±49.64 days vs 7.43±12.38 days, 51.84±43.79 days vs 1.43±5.01 days, respectively, data not shown), cox regression model showed lymphopenia <0.66×10^9/L/0.91×10^9/L, but not duration of lymphopenia <1.0×10^9/L, was the independent prognostic factor. That suggest chemotherapy-associated lymphopenia level, rather than duration of lymphopenia <1.0×10^9/L, may play an important role in the prognosis of CRC receiving adjuvant chemotherapy.